

Serial No. 10/029,302

Docket No. K-0382

Amdt. dated January 13, 2006

Reply to Office Action of October 28, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of converting AAL2 cells in an ATM network system, the method comprising ~~the steps of~~:
 - (a) receiving one or more AAL2 cells that include a Common Part Sublayer (CPS) CPS packet including one of N data subsets of an original user data set;
 - (b) extracting said CPS packet from said one or more AAL2 cells received in ~~the step (a)~~;
 - (c) generating an AAL5 cell by adding an ATM header to said data subset included in said CPS packet;
 - (d) storing intermediate CRC and length values of said data subset included in said AAL5 cell generated in ~~the step (c)~~ in a memory without storing the data subset of the generated cell; and
 - (e) repeating ~~the steps (a) to (d)~~ until said CPS packet extracted in ~~the step (b)~~ is a final CPS packet that includes an *Nth* data subset having its size of *n* bytes.

2. (Currently amended) The method of claim 1, further comprising ~~the step of~~ (f) calculating total CRC and length values of said original user data set.

3. (Currently amended) The method of claim 2, further comprising ~~the steps of~~:
(g) generating an N th AAL5 cell corresponding to said final CPS packet by adding a trailer containing said total values to a payload containing said N th data subset if $1 \leq n \leq 40$.

4. (Currently amended) The method of claim 2, further comprising ~~the steps of~~:
(h) generating an N th AAL5 cell that includes said N th data subset if $41 \leq n \leq 48$;
and
(i) generating an $(N+1)$ th AAL5 cell that includes a trailer containing said total values.

5. (Original) The method of claim 2, wherein said total values are calculated by using each intermediate CRC value and length value stored in said memory and last CRC and length values of said N th data subset.

6. (Currently amended) The method of claim 1, wherein each CPS packet extracted in ~~the step~~ (b) includes a CPS packet header including a UUI field set to 26.

7. (Currently amended) The method of claim 1, wherein each AAL5 cell generated in ~~the step~~ (c) includes an ATM header including a PTI field set to "000".

8. (Original) The method of claim 5, wherein said total CRC value of said original user data set is calculated by adding each intermediate CRC value stored in said memory with said last CRC value of said *Nth* data subset included in said final CPS packet.

9. (Currently amended) The method of claim 5, wherein said total length value of ~~said~~ said original user data set is calculated by adding each intermediate length value stored in said memory with said last length of said *Nth* data subset included in said final CPS packet.

10. (Currently amended) The method of claim 3, wherein said payload of said *Nth* AAL5 cell generated in ~~the step~~ (g) includes $(40 - n)$ zeros.

11. (Currently amended) A method of converting AAL5 cells in an ATM network system, the method comprising ~~the steps of~~:

(a) receiving a first AAL5 cell that includes a first payload including a first data subset of an original user data set;

(b) storing said first payload in a memory if said first cell is not a final AAL5 cell;

(c) receiving a next AAL5 cell that includes a next payload including a next data subset of said original user data set;

(d) generating a CPS packet by adding a packet header to said payload stored in said memory if said AAL5 cell received in ~~the step~~ (c) is not said final AAL5 cell; and

(e) emptying said memory and storing said next payload in said memory.

12. (Currently amended) The method of claim 11, further comprising ~~the steps of~~:

(f) recording the length of said payload included in said generated packet;

(g) generating one or more AAL2 cells corresponding to said CPS packet generated; and

(h) repeating ~~the steps~~ (c) to (g) until said next AAL5 cell received in ~~the step~~ (c) is said final AAL5 cell that includes a final payload.

13. (Currently amended) The method of claim 12, further comprising ~~the step of~~ (i) determining a final length by subtracting each length recorded in ~~the step~~ (f) from a total length of said user data set, said total length being included in said final AAL5 cell.

14. (Currently amended) The method of claim 13, further comprising ~~the steps of~~:

(j) generating a CPS packet by adding a packet header to said payload recently stored in said memory in ~~the step~~ (e) if said final length is greater than 48;

(k) extracting a final data subset of said original user data set from said final payload; and

(l) generating a final CPS packet by adding a packet header to said extracted final data subset.

15. (Currently amended) The method of claim 14, further comprising ~~the steps of:~~
generating one or more AAL2 cells corresponding to said packet generated in ~~the~~
~~step~~ (j); and
generating one or more AAL2 cells corresponding to said final packet generated in
~~the step~~ (l).

16. (Currently amended) The method of claim 13, further comprising ~~the steps of:~~
extracting a final data subset of said original user data set from said payload
recently stored in said memory if said final length is less than 49; and
generating a final CPS packet by adding a packet header to said extracted final data
subset.

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17. (Currently amended) The method of claim 16, further comprising ~~the step of~~ generating one or more AAL2 cells corresponding to said final CPS packet.

18. (Original) The method of claim 11, wherein said final AAL5 cell includes its PTI field set to "001".

19. (Original) The method of claim 14, wherein said final CPS packet generated contains its UUI field set to 27.

20. (Original) The method of claim 16, wherein said final CPS packet generated contains its UUI field set to 27.